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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,609	05/01/2001	Juan J. Ibarra	FORE-85	5593

7590 04/17/2006

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EXAMINER

THAI, CANG G

ART UNIT	PAPER NUMBER
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3629

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/847,609	IBARRA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Cang G. Thai	3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 is/are allowed.
- 6) ☒ Claim(s) 9-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,960,417 (PAN ET AL).

As for Claim 9, PAN discloses a computer program product for enabling a processor computer to estimate costs associated with producing a printed circuit board assembly comprising:

a computer readable program code means for enabling the computer to estimate costs with labor portion of manufacturing the printed circuit board assembly {Column 2, Lines 27-30, wherein this reads over "the cost computer calculates direct labor cost from data from the direct material data and from the global variables in the memory"}.

PAN did not explicitly describe a manufacturing the printed circuit board assembly. The aspect of how to estimate costs with a labor portion does not depend on the type of circuit board assembly. It does not matter what the product is, i.e., circuit

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boards or car parts. Cost factor would increase or decrease accordingly because it is a function of volume and labor cost.

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to apply the same concept of estimating costs with a labor portion to forecast a volume to be made within a particular time with a labor portion.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement a computer system for factor (as a function of volume and labor cost) manufacturing process for a product because it would help to predict the cost of a product based on future volume of that particular product.

As for Claim 10, PAN discloses a computer program product as described in Claim 9 wherein the code means includes means for calculating a cost of conversion a predetermined percentage of surface mount technology components of the printed circuit board assembly (Column 8, Lines 12-20). Project volume can be seen as a production quantity wherein the output data obtained from product mix table A20 is available as indicated by line 22 during the required hours computing the step B10 which is described in section B1 to project how much of that particular product for time in equivalent hours. Calculating cost as a function of the volume would increase and decrease accordingly depending on the output volume (output per hour – projected volume for a pre-determined period of time); and

means for generating a cost of conversion for the printed circuit board assembly based on actual percentage of surface mount technology components of the printed

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circuit board assembly from the cost of conversion at the predetermined percentage (Column 11, Lines 49-65). The cost conversion can be obtained accordingly base on the manufacture production capability and the other factors related to the particular manufacture. Since you know your production rate for a particular of time and you know labor rate for a particular time, labor rate is a function of a dollar value over labor hour base on the product mix for a particular time. Therefore, with regard to the conversion factor, if the volume for a particular of time falls under a percentage amount of the actual labor rate (cost of labor) can be obtained accordingly.

As for Claim 11, PAN discloses a computer program product as described in Claim 10 wherein the predetermined percentage is 90% and the calculating means calculates the cost conversion at the predetermined percentage based on the formula Cost of Conversion where volume is a projected annual volume for the printed circuit board assembly {Column 8, Lines 12-14, wherein this reads over "The output data obtained from product mix table A20 is available as indicated by line 22 during the required hours computing step B10 which is described in section B1"}. For example, given a pre-determined or forecast 100 parts to be made for a particular period of time and the labor rate is \$10.00 per hour. If the actual production output of 50 parts, the labor rate would decrease accordingly once you have the labor rate and production rate. Any conversion factor can be obtained accordingly.

As for Claim 12, PAN discloses a computer program product as described in Claim 11 wherein the generating means generates the cost of conversion for the printed circuit board assembly based on the formula  $\$CPPx$  (Column 11, Lines 49-65). The

cost conversion can be obtained accordingly base on the manufacture production capability and the other factors related to the particular manufacture. Since you know your production rate for a particular of time and you know labor rate for a particular time, labor rate is a function of a dollar value over labor hour base on the product mix for a particular time. Therefore, with regard to the conversion factor, if the volume for a particular of time falls under a percentage amount of the actual labor rate (cost of labor) can be obtained accordingly. For example, given a pre-determined or forecast 100 parts to be made for a particular period of time and the labor rate is \$10.00 per hour. If the actual production output of 50 parts, the labor rate would decrease accordingly once you have the labor rate and production rate. Any conversion factor can be obtained accordingly. Conversion factor is based on manufacture production capability and other factors related to the particular manufacture. It does not matter what product is, i.e. circuit boards or car parts.

***Allowable Subject Matter***

4. Claims 1-8 are allowed.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

I. U.S. Patent:

- 1) U.S. Patent No. 5,278,751 (ADIANO ET AL) is cited to teach dynamic manufacturing process control,

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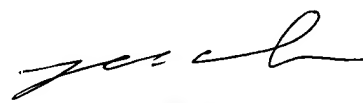
- 2) U.S. Patent No. 5,893,082 (MCCORMICK) is cited to teach system for processing and presenting cost estimates in the construction industry,
- 3) U.S. Patent No. 6,249,776 (BAJUK ET AL) is cited to teach methodology for proper weighting of photolithography in the cost of semiconductor products, and
- 4) U.S. Patent No. 6,219,654 (RUFFIN) is cited to teach method, system and program product for performing cost analysis of an information technology implementation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cang (James) G. Thai whose telephone number is (571) 272-6499. The examiner can normally be reached on 6:30 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on (571) 272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CGT  
04/11/2006



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